

DESTIN FIRE CONTROL DISTRICT  
FIREFIGHTERS' RETIREMENT TRUST FUND

ACTUARIAL VALUATION  
AS OCTOBER 1, 2018

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2020

GASB 67/68 DISCLOSURE INFORMATION  
AS OF SEPTEMBER 30, 2018



**FOSTER & FOSTER**  
ACTUARIES AND CONSULTANTS

January 4, 2019

Board of Trustees  
Destin Fire Control District  
Firefighters' Retirement Trust Fund  
848 Airport Road  
Destin, FL 32541

Re: Destin Fire Control District Firefighters' Retirement Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the Destin Fire Control District Firefighters' Retirement Trust Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 175, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Destin, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2018 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.


To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Destin, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Fire Control District Firefighters' Retirement Trust Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact me at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By:

  
Drew D. Ballard, EA, MAAA  
Enrolled Actuary #17-8193

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Enclosures

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## SUMMARY OF REPORT

The regular annual actuarial valuation of the Destin Fire Control District Firefighters' Retirement Trust Fund, performed as of October 1, 2018, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2020.

The contribution requirements, compared with those set forth in the October 1, 2017 actuarial valuation report, are as follows:

	New Asmp/Mthd 10/1/2018 <u>9/30/2020</u>	Old Asmp/Mthd 10/1/2018 <u>9/30/2019</u>	10/1/2017 <u>9/30/2018</u>
Valuation Date			
Applicable to Fiscal Year Ending			
Minimum Required Contribution	\$1,218,784	\$1,207,607	
% of Projected Annual Payroll		68.6	79.3
Member Contributions (Est.)	114,148	124,140	
% of Projected Annual Payroll		6.8	6.8
District And State Required Contribution	1,104,636	1,083,467	
% of Projected Annual Payroll		61.8	72.5
State Contribution (Est.) <sup>1</sup>	262,471	262,471	262,471
% of Projected Annual Payroll		14.9	14.9
Balance From District	\$842,165	\$820,996	
% of Projected Annual Payroll		46.9	57.6

<sup>1</sup> Represents the amount received in calendar 2018. As per a Mutual Consent Agreement between the Membership and the District, all State Monies received each year will be available to offset the District's required contribution.

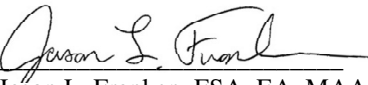
Please note that the District contributed more than what was required in 2018. The excess contribution reduced the plan's unfunded liability by approximately \$1.19 million and reduced the September 30, 2019 contribution requirement by about \$121,500. As requested, a development of the District's excess contribution can be found on page 26.


Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included an average salary increase of 1.31% which fell short of the 5.15% assumption, fewer retirements than expected, and more turnover than expected. There were no significant sources of unfavorable experience.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By:   
Jason L. Franken, FSA, EA, MAAA

By:   
Drew D. Ballard, EA, MAAA

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

There have been no changes in benefits since the prior valuation.

### Actuarial Assumption/Method Changes

As a result of an actuarial experience study dated November 30, 2018, the Board of Trustees approved a number of changes to the actuarial assumptions and methods in conjunction with this report, as follows:

- The method used to develop the minimum contribution requirement has been changed from the percentage-of-payroll method to the dollar-funding method
- The projection methodology described in the November 30, 2018 actuarial experience study for determining the applicable fiscal year for contribution requirements has been implemented
- The change in the UAAL associated with the assumption changes in this report and all future layers of UAAL will be amortized over a 15-year period instead of a 25-year period
- The investment return assumption was lowered from 7.5% per year to 7.4% per year, net of investment-related expenses
- The assumed rates of salary increase have been amended
- The assumed rates of normal retirement have been amended
- The assumed rates of withdrawal have been amended

## COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Asmp/Mthd <u>10/1/2018</u>	Old Asmp/Mthd <u>10/1/2018</u>	<u>10/1/2017</u>
<b>A. Participant Data</b>			
Actives	29	29	28
Service Retirees	13	13	10
DROP Retirees	2	2	4
Beneficiaries	1	1	1
Disability Retirees	1	1	1
Terminated Vested	<u>8</u>	<u>8</u>	<u>8</u>
Total	54	54	52
Total Annual Payroll	\$1,746,377	\$1,759,597	\$1,709,674
Payroll Under Assumed Ret. Age	1,546,829	1,759,597	1,709,674
Annual Rate of Payments to:			
Service Retirees	900,662	900,662	720,019
DROP Retirees	127,432	127,432	255,881
Beneficiaries	58,904	58,904	57,749
Disability Retirees	14,297	14,297	14,297
Terminated Vested	155,943	155,943	155,026
<b>B. Assets</b>			
Actuarial Value (AVA) <sup>1</sup>	20,578,226	20,578,226	18,308,131
Market Value (MVA) <sup>1</sup>	20,867,421	20,867,421	18,376,893
<b>C. Liabilities</b>			
Present Value of Benefits			
Actives			
Retirement Benefits	11,817,407	11,726,180	11,311,015
Disability Benefits	55,028	54,161	53,429
Death Benefits	30,157	29,523	30,454
Vested Benefits	496,668	462,455	527,433
Refund of Contributions	34,082	34,405	26,027
Service Retirees	13,343,889	13,198,318	10,631,399
DROP Retirees <sup>1</sup>	2,433,984	2,405,537	4,801,104
Beneficiaries	383,471	382,160	411,376
Disability Retirees	177,628	175,685	176,373
Terminated Vested	1,434,676	1,414,945	1,443,461
Share Plan Balances <sup>1</sup>	<u>0</u>	<u>0</u>	<u>0</u>
Total	30,206,990	29,883,369	29,412,071



C. Liabilities - (Continued)	New Asmp/Mthd <u>10/1/2018</u>	Old Asmp/Mthd <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	10,571,564	10,137,151	9,879,644
Present Value of Future Member Contributions	718,866	689,326	671,816
Normal Cost (Retirement)	335,071	395,100	395,765
Normal Cost (Disability)	5,198	6,102	5,693
Normal Cost (Death)	2,073	2,634	2,466
Normal Cost (Vesting)	45,362	47,180	52,203
Normal Cost (Refunds)	<u>4,489</u>	<u>4,257</u>	<u>3,192</u>
Total Normal Cost	392,193	455,273	459,319
Present Value of Future Normal Costs	2,269,046	2,197,207	2,307,119
Accrued Liability (Retirement)	9,875,889	9,849,333	9,334,722
Accrued Liability (Disability)	17,150	17,929	19,016
Accrued Liability (Death)	16,058	16,235	17,454
Accrued Liability (Vesting)	251,366	222,278	268,291
Accrued Liability (Refunds)	3,833	3,742	1,756
Accrued Liability (Inactives) <sup>1</sup>	17,773,648	17,576,645	17,463,713
Share Plan Balances <sup>1</sup>	<u>0</u>	<u>0</u>	<u>0</u>
Total Actuarial Accrued Liability (EAN AL)	27,937,944	27,686,162	27,104,952
Unfunded Actuarial Accrued Liability (UAAL)	7,359,718	7,107,936	8,796,821
Funded Ratio (AVA / EAN AL)	73.7%	74.3%	67.5%

D. Actuarial Present Value of Accrued Benefits	New Asmp/Mthd <u>10/1/2018</u>	Old Asmp/Mthd <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances <sup>1</sup>	17,773,648	17,576,645	17,463,713
Actives	6,816,640	6,567,407	5,815,951
Member Contributions	<u>1,168,914</u>	<u>1,168,914</u>	<u>1,116,110</u>
Total	25,759,202	25,312,966	24,395,774
Non-vested Accrued Benefits	<u>1,187,956</u>	<u>1,189,926</u>	<u>1,327,562</u>
Total Present Value			
Accrued Benefits (PVAB)	26,947,158	26,502,892	25,723,336
Funded Ratio (MVA / PVAB)	77.4%	78.7%	71.4%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	444,266	0	
New Accrued Benefits	0	491,185	
Benefits Paid	0	(1,581,570)	
Interest	0	1,869,941	
Other	<u>0</u>	<u>0</u>	
Total	444,266	779,556	

	New Asmp/Mthd	Old Asmp/Mthd	
Valuation Date	10/1/2018	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2019</u>	<u>9/30/2018</u>

#### E. Pension Cost

Normal Cost <sup>2</sup>	\$425,616	\$472,346	
% of Total Annual Payroll <sup>2</sup>		26.8	27.9
Administrative Expenses <sup>2</sup>	32,335	30,913	
% of Total Annual Payroll <sup>2</sup>		1.8	1.9
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 25 years (as of 10/1/2018) <sup>2</sup>	760,833	704,348	
% of Total Annual Payroll <sup>2</sup>		40.0	49.5
Minimum Required Contribution	1,218,784	1,207,607	
% of Total Annual Payroll <sup>2</sup>		68.6	79.3
Expected Member Contributions <sup>2</sup>	114,148	124,140	
% of Total Annual Payroll <sup>2</sup>		6.8	6.8
Expected District and State Contribution	1,104,636	1,083,467	
% of Total Annual Payroll <sup>2</sup>		61.8	72.5

#### F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
Total Required Contribution	1,327,574
District and State Requirement	1,213,734

#### Actual Contributions Made:

Members (excluding buyback)	113,840
District	2,134,887
State	<u>266,748</u>
Total	2,515,475

#### G. Net Actuarial (Gain)/Loss

(266,439)

<sup>1</sup> The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2018 and 9/30/2017.

<sup>2</sup> Contributions developed as of 10/1/2018 displayed above have been adjusted to account for assumed salary increase and interest components.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2018	7,359,718
2019	7,151,371
2020	6,927,606
2026	5,191,082
2032	2,526,024
2037	(85,464)
2043	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	1.31%	5.15%
Year Ended 9/30/2017	5.30%	4.61%
Year Ended 9/30/2016	-1.94%	4.63%
Year Ended 9/30/2015	0.70%	7.50%
Year Ended 9/30/2014	0.04%	7.50%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2018	8.67%	7.28%	7.50%
Year Ended 9/30/2017	11.67%	7.03%	7.50%
Year Ended 9/30/2016	10.74%	7.75%	8.00%
Year Ended 9/30/2015	-5.49%	6.87%	8.00%
Year Ended 9/30/2014	12.26%	9.72%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$1,746,377
	10/1/2008	2,510,751
(b) Total Increase		-30.44%
(c) Number of Years		10.00
(d) Average Annual Rate		-3.57%

## STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



Drew D. Ballard, EA, MAAA  
Enrolled Actuary #17-8193

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112 Florida Statutes:

Mr. Keith Brinkman  
Bureau of Local  
Retirement Systems  
Post Office Box 9000  
Tallahassee, FL 32315-9000

Mr. Steve Bardin  
Municipal Police and Fire  
Pension Trust Funds  
Division of Retirement  
Post Office Box 3010  
Tallahassee, FL 32315-3010

## RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$8,796,821
(2)	Sponsor Normal Cost developed as of October 1, 2017	343,061
(3)	Expected administrative expenses for the year ended September 30, 2018	32,011
(4)	Expected interest on (1), (2) and (3)	686,692
(5)	Sponsor contributions to the System during the year ended September 30, 2018	2,401,635
(6)	Expected interest on (5)	82,575
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	7,374,375
(8)	Change to UAAL due to Assumption Change	251,782
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(266,439)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	7,359,718

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Benefit Improv.	10/1/2002	14	382,931	41,753
Benefit Improv.	10/1/2005	17	726,749	71,241
Actuarial Loss	10/1/2006	18	800,781	76,276
Method Change	10/1/2006	18	416,036	39,628
Actuarial Loss	10/1/2007	19	161,097	14,951
Benefit Improv.	10/1/2007	19	1,447,489	134,337
Benefit Improv.	10/1/2007	19	2,348,465	217,954
Actuarial Loss	10/1/2008	19	1,913,671	177,602
Method Change	10/1/2008	19	(116,312)	(10,795)
Actuarial Gain	10/1/2009	19	(690,863)	(64,117)
Assump Change	10/1/2009	19	241,927	22,452
Actuarial Loss	10/1/2010	19	396,596	36,807
Method Change	10/1/2010	19	(25,766)	(2,391)
Actuarial Gain	10/1/2011	19	(161,743)	(15,011)
Actuarial Gain	10/1/2012	19	(105,256)	(9,768)
Benefit Improv.	10/1/2012	19	514,594	47,758
Actuarial Gain	10/1/2013	20	(293,008)	(26,558)
Actuarial Gain	10/1/2014	21	(1,432,170)	(127,050)
Actuarial Gain	10/1/2015	22	(211,346)	(18,385)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Assump Change	10/1/2015	22	(20,381)	(1,773)
Assump Change	10/1/2016	23	1,397,641	119,419
Actuarial Gain	10/1/2016	23	(685,066)	(58,534)
Actuarial Loss	10/1/2017	24	368,309	30,957
Actuarial Gain	10/1/2018	25	(266,439)	(22,061)
Assump Change	10/1/2018	15	<u>251,782</u>	<u>26,394</u>
			7,359,718	701,086

## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$8,796,821
(2) Expected UAAL as of October 1, 2018	7,374,375
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	41,028
Salary Increases	(200,768)
Active Decrements	(175,787)
Inactive Mortality	56,526
Other	<u>12,562</u>
Increase in UAAL due to (Gain)/Loss	(266,439)
Assumption Changes	<u>251,782</u>
(4) Actual UAAL as of October 1, 2018	\$7,359,718



## ACTUARIAL ASSUMPTIONS AND METHODS

### Mortality Rate

#### *Healthy Active Lives:*

**Female:** RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

**Male:** RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

#### *Healthy Inactive Lives:*

**Female:** RP2000 Generational, 100% Annuitant White Collar, Scale BB

**Male:** RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

#### *Disabled Lives:*

**Female:** 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

**Male:** 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2016 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

### Interest Rate

7.40% (prior year 7.50%) per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

### Payroll Growth

None.

### Administrative Expenses

\$29,796 annually, based on actual expenses incurred in the prior fiscal year.

## Salary Increases

### *Current*

<u>Credited Service</u>	<u>Salary Increase</u>
0	6.5%
1	6.5%
2	6.0%
3	6.0%
4	5.5%
5	5.5%
6	5.0%
7	5.0%
8	4.5%
9	4.5%
10+	4.0%

### *Previous*

<u>Credited Service</u>	<u>Salary Increase</u>
0	10.0%
1	9.0%
2	8.0%
3	7.5%
4	7.0%
5	6.5%
6	6.0%
7	5.5%
8	5.0%
9	4.5%
10+	4.0%

This assumption is based on the results of an experience study dated November 2018.

## Normal Retirement

### *Current*

<u>Years Following First Eligibility</u>	<u>Rate</u>
0	80.0%
1	80.0%
2	100.0%

### *Previous*

Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age (Age 52 with 25 years of Credited Service for Members hired on or after October 1, 2012). Also, any member who had reached Normal Retirement was assumed to continue employment for one additional year.

This assumption is based on the results of an experience study dated November 2018.

### Early Retirement

Commencing with the earliest Early Retirement Age (50), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption is reasonable based on plan provisions.

### Disability Rate

Sample rates below (1201).

<u>Age</u>	<u>Rate</u>
20	0.03%
30	0.04%
40	0.07%
50	0.18%

It is assumed that 75% of disablements are service related. These assumptions are based on assumptions used for other plans containing municipal firefighters.

### Termination Rate

<u>Credited Service</u>	<u>Rate</u>
0	10.0%
1-2	5.0%
3-4	4.5%
5-6	4.0%
7-8	3.5%
9-10	3.0%
11-14	2.5%
15+	2.0%

Previously, age-based rates were used. This assumption is based on the results of an experience study dated November 2018.

### Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are applied for determining the minimum required contribution:

Interest – A half-year, based on the current assumption of 7.40%

Salary – A full-year (none for fiscal 2019), based on the current assumption of 4.65%

### Actuarial Asset Method

All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

## GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered Members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Individual Entry Age Normal Actuarial Cost Method (Level Percent of Compensation) is the method used to determine required contributions under the Plan. The use of this method involves the systematic funding of the Normal Cost (described above) and the Unfunded Accrued (Past Service) Liability. The actuarial accrued liability for active participants is the difference between the present value of future benefits and the present value of future Normal Costs. The actuarial accrued liability for inactive participants is the present value of future benefits.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the actuarial value of assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	903,951.52	903,951.52
Total Cash and Equivalents	903,951.52	903,951.52
Receivables:		
Investment Income	14,114.86	14,114.86
Total Receivable	14,114.86	14,114.86
Investments:		
Mutual Funds:		
Fixed Income	5,542,507.45	5,395,567.37
Equity	10,204,890.78	12,632,407.72
Pooled/Common/Commingled Funds:		
Real Estate	1,872,881.72	1,930,333.06
Total Investments	17,620,279.95	19,958,308.15
Total Assets	18,538,346.33	20,876,374.53
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	7,589.79	7,589.79
Administrative Expenses	1,364.16	1,364.16
Total Liabilities	8,953.95	8,953.95
NET POSITION RESTRICTED FOR PENSIONS	18,529,392.38	20,867,420.58

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2018  
Market Value Basis

ADDITIONS

Contributions:

Member	113,839.89
District	2,134,886.70
State	266,748.38

Total Contributions	2,515,474.97
---------------------	--------------

Investment Income:

Net Realized Gain (Loss)	30,927.49	
Unrealized Gain (Loss)	959,122.42	
Net Increase in Fair Value of Investments		990,049.91
Interest & Dividends		643,546.80
Less Investment Expense <sup>1</sup>		(47,177.77)

Net Investment Income	1,586,418.94
-----------------------	--------------

Total Additions	4,101,893.91
-----------------	--------------

DEDUCTIONS

Distributions to Members:

Benefit Payments	876,448.43
Lump Sum DROP Distributions	701,367.10
Refunds of Member Contributions	3,754.78

Total Distributions	1,581,570.31
---------------------	--------------

Administrative Expense	29,796.33
------------------------	-----------

Total Deductions	1,611,366.64
------------------	--------------

Net Increase in Net Position	2,490,527.27
------------------------------	--------------

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	18,376,893.31
-----------------------	---------------

End of the Year	20,867,420.58
-----------------	---------------

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION  
September 30, 2018

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/Losses Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
09/30/2014	519,012	0	0	0	0	0
09/30/2015	(1,940,329)	(388,065)	0	0	0	0
09/30/2016	359,088	143,634	71,816	0	0	0
09/30/2017	657,046	394,228	262,819	131,410	0	0
09/30/2018	174,248	139,398	104,548	69,698	34,848	0
Total		289,195	439,183	201,108	34,848	0

<u>Development of Investment Gain/Loss</u>	
Market Value of Assets, 09/30/2017	18,376,893
Contributions Less Benefit Payments & Admin Expenses	904,108
Expected Investment Earnings	1,412,171
Actual Net Investment Earnings	1,586,419
2018 Actuarial Investment Gain/(Loss)	<u>174,248</u>

\*Expected Investment Earnings =  $0.075 * (18,376,893 + 0.5 * 904,108)$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2018	20,867,421
(2) Gains/(Losses) Not Yet Recognized	289,195
(3) Actuarial Value of Assets, 09/30/2018, (1) - (2)	<u>20,578,226</u>
(A) 09/30/2017 Actuarial Assets:	18,308,131
(I) Net Investment Income:	
1. Interest and Dividends	643,547
2. Realized Gains (Losses)	30,927
3. Change in Actuarial Value	738,689
4. Investment Expenses	<u>(47,178)</u>
Total	1,365,986
(B) 09/30/2018 Actuarial Assets:	20,578,226
Actuarial Assets Rate of Return = $2I/(A+B-I)$ :	7.28%
Market Value of Assets Rate of Return:	8.67%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(41,028)
10/01/2018 Limited Actuarial Assets:	20,578,226

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
SEPTEMBER 30, 2018  
Actuarial Asset Basis

REVENUES

Contributions:		
Member	113,839.89	
District	2,134,886.70	
State	266,748.38	
Total Contributions		2,515,474.97
Earnings from Investments:		
Interest & Dividends	643,546.80	
Net Realized Gain (Loss)	30,927.49	
Change in Actuarial Value	738,689.42	
Total Earnings and Investment Gains		1,413,163.71
EXPENDITURES		
Distributions to Members:		
Benefit Payments	876,448.43	
Lump Sum DROP Distributions	701,367.10	
Refunds of Member Contributions	3,754.78	
Total Distributions		1,581,570.31
Expenses:		
Investment related <sup>1</sup>	47,177.77	
Administrative	29,796.33	
Total Expenses		76,974.10
Change in Net Assets for the Year		2,270,094.27
Net Assets Beginning of the Year		18,308,131.31
Net Assets End of the Year <sup>2</sup>		20,578,225.58

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.



DEFERRED RETIREMENT OPTION PLAN ACTIVITY  
October 1, 2017 to September 30, 2018

Beginning of the Year Balance	746,524.05
Plus Additions	187,634.70
Investment Return Earned	31,775.02
Less Distributions	(701,367.10)
End of the Year Balance	264,566.67

RECONCILIATION OF DISTRICT'S SHORTFALL/(PREPAID) CONTRIBUTION  
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2018

(1) Total Required Contribution Rate	79.3%
(2) Pensionable Payroll Derived from Member Contributions	\$1,674,116.03
(1) Required District and State Contributions	\$1,213,734.12
(4) Less Actual Member Contributions	-
(2) Less Allowable State Contribution	<u>(266,748.38)</u>
(3) Required District Contribution for Fiscal 2018	946,985.74
(4) Less 2017 Prepaid Contribution	0.00
(5) Less Actual District Contributions	<u>(2,134,886.70)</u>
(6) Equals District's Shortfall/(Prepaid) Contribution <sup>1</sup> as of September 30, 2018	(\$1,187,900.96)

<sup>1</sup> Please note that the District elected to apply the entire contribution towards the September 30, 2018 contribution requirement. As requested, this exhibit develops the amount of the excess contribution. The excess contribution reduces the unfunded liability and does not generate a prepaid contribution to be used in the future.

## STATISTICAL DATA

	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives - Hired Before 10/1/12</u>				
Number	23	21	20	19
Average Current Age	40.8	41.9	42.5	43.3
Average Age at Employment	26.8	26.8	27.0	26.8
Average Past Service	14.0	15.1	15.5	16.5
Average Annual Salary	\$64,902	\$63,454	\$67,579	\$68,159
<u>Actives - Hired On/After 10/1/12</u>				
Number	2	4	8	10
Average Current Age	32.8	31.8	30.2	30.4
Average Age at Employment	31.7	30.4	28.9	28.6
Average Past Service	1.1	1.4	1.3	1.8
Average Annual Salary	\$43,227	\$43,626	\$44,762	\$46,457
<u>Service Retirees</u>				
Number	9	10	10	13
Average Current Age	55.3	56.8	57.8	56.3
Average Annual Benefit	\$71,101	\$70,483	\$72,002	\$69,282
<u>DROP Retirees</u>				
Number	4	3	4	2
Average Current Age	49.4	46.8	48.7	48.0
Average Annual Benefit	\$53,866	\$56,223	\$63,970	\$63,716
<u>Beneficiaries</u>				
Number	0	1	1	1
Average Current Age	N/A	52.4	53.4	54.4
Average Annual Benefit	N/A	\$56,617	\$57,749	\$58,904
<u>Disability Retirees</u>				
Number	1	1	1	1
Average Current Age	51.9	52.9	53.9	54.9
Average Annual Benefit	\$14,297	\$14,297	\$14,297	\$14,297
<u>Terminated Vested</u>				
Number	6	7	8	8
Average Current Age <sup>1</sup>	37.7	38.1	39.1	40.8
Average Annual Benefit <sup>2</sup>	\$23,820	\$22,161	\$22,147	\$22,278

<sup>1</sup> Effective 10/1/2018, the Average Current Age excludes participants awaiting a refund of contributions.

<sup>2</sup> The Average Annual Benefit excludes participants awaiting a refund of contributions.

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	2	0	0	1	0	0	0	0	0	0	3
25 - 29	2	1	0	0	0	0	0	0	0	0	0	3
30 - 34	0	0	1	0	0	1	0	0	0	0	0	2
35 - 39	1	0	0	0	0	1	1	3	0	0	0	6
40 - 44	0	1	0	0	0	0	2	3	1	0	0	7
45 - 49	0	0	0	0	1	0	0	3	1	0	0	5
50 - 54	0	0	0	0	0	0	2	0	0	0	0	2
55 - 59	0	0	0	0	0	0	0	0	1	0	0	1
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	4	1	0	2	2	5	9	3	0	0	29

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 10/1/2017	28
b. Terminations	
i. Vested (partial or full) with deferred benefits	(2)
ii. Non-vested or full lump sum distribution received	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>0</u>
g. Continuing participants	26
h. New entrants	<u>3</u>
i. Total active life participants in valuation	29

### 2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested Deferred	<u>Total</u>
a. Number prior valuation	10	4	1	1	8	24
Retired	3	(2)	0	0	(1)	0
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	2	2
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(1)	(1)
Rehires	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	13	2	1	1	8	25

SUMMARY OF CURRENT PLAN  
(Through Resolution No. 16-09)

<u>Eligibility</u>	Full-time employees who are classified as full-time certified firefighters participate in the System as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of employment with the District as a Firefighter.
<u>Salary</u>	Base pay, plus state supplemental education pay, plus EMT and Paramedic educational differential pay.
<u>Average Final Compensation</u>	Average Salary for the best 5 years during the 10 years immediately preceding retirement or termination.
<u>Member Contributions</u>	6.8% of Salary.
<u>District and State Contributions</u>	Remaining amount required in order to pay current costs and amortize any unfunded past service cost as provided in Part VII of Chapter 112, F.S.
<u>Normal Retirement</u>	
Date	Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age.  Members hired on or after October 1, 2012 become eligible following the earlier of 1) Age 55 with 10 years of Credited Service or 2) Age 52 with 25 years of Credited Service.
Benefit	3.5% of Average Final Compensation <u>times</u> Credited Service (2.5% if hired on or after October 1, 2012)
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% for each year prior to Normal Retirement.

### Cost-of-Living Adjustment

Service retirees on and after 10/1/02 (hired before 10/1/12) receive annual 2% increases beginning the October 1 following one full year of retirement. Members hired on and after 10/1/12 are not eligible for the cost-of-living adjustment.

### Vesting

#### Schedule

100% after 7 years of contributing service if hired before 10/1/12. Members hired on and after 10/1/12 are 100% vested after 10 years.

#### Benefit Amount

Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

### Disability

#### Eligibility

##### Service Incurred

Covered from Date of Employment.

##### Non-Service Incurred

10 years of Credited Service.

#### Exclusions

Disability resulting from use of drugs, illegal participation in riots, service in military, etc.

#### Benefit

Benefit accrued to date of disability but not less than 42% of Average Final Compensation (if Service Incurred).

#### Duration

Payable for life and ten years certain or until recovery (as determined by the Board). Options available.

### Death Benefits

#### Pre-Retirement

##### Vested

Monthly accrued benefit payable to designated beneficiary for 10 years.

##### Non-Vested

Refund of accumulated contributions without interest.

#### Post-Retirement

Benefits payable to beneficiary in accordance with option selected at retirement.

Board of Trustees

Two District appointees, two Members of the Department elected by the membership, and a fifth Member elected by other 4 and appointed by the District.

Deferred Retirement Option Plan

Eligibility

Satisfaction of Normal Retirement requirements.

Participation

Not to exceed 60 months.

Rate of Return

At Member's election:

(1) Actual net rate of investment return (total return net of brokerage commissions, management fees and transaction costs) credited each fiscal quarter, or

(2) 6.5% per annum compounded monthly.

Members may elect to change form of return one time.

Form of Distribution

Cash lump sum (options available) at termination of employment.

Share Plan

Funded Status

Not currently funded.



STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	903,952
Total Cash and Equivalents	903,952
Receivables:	
Investment Income	14,115
Total Receivable	14,115
Investments:	
Mutual Funds:	
Fixed Income	5,395,567
Equity	12,632,408
Pooled/Common/Commingled Funds:	
Real Estate	1,930,333
Total Investments	19,958,308
Total Assets	20,876,375
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	7,590
Administrative Expenses	1,364
Total Liabilities	8,954
NET POSITION RESTRICTED FOR PENSIONS	20,867,421

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2018  
Market Value Basis

ADDITIONS

## Contributions:

Member	113,840	
District	2,134,887	
State	266,748	
Total Contributions		2,515,475
Investment Income:		
Net Increase in Fair Value of Investments	990,050	
Interest & Dividends	643,547	
Less Investment Expense <sup>1</sup>	(47,178)	
Net Investment Income		1,586,419
Total Additions		4,101,894

DEDUCTIONS

## Distributions to Members:

Benefit Payments	876,448	
Lump Sum DROP Distributions	701,367	
Refunds of Member Contributions	3,755	
Total Distributions		1,581,570
Administrative Expense		29,796
Total Deductions		1,611,366
Net Increase in Net Position		2,490,528
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		18,376,893
End of the Year		20,867,421

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

### Plan Description

#### *Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: Two District appointees, two Members of the Department elected by the membership, and a fifth Member elected by other four and appointed by the District.

#### *Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	16
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	8
Active Plan Members	28
	52

#### *Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

##### Normal Retirement:

Date: Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age.

Benefit: 3.5% of Average Final Compensation times Credited Service (2.5% if hired on or after October 1, 2012).

##### Early Retirement:

Eligibility: Age 50 and 10 Years of Credited Service.

Benefit: Accrued benefit, reduced 3% for each year prior to Normal Retirement.

##### Cost-of-Living Adjustment:

Service retirees on and after 10/1/02 (hired before 10/1/12) receive annual 2% increases beginning the October 1 following one full year of retirement. Members hired on and after 10/1/12 are not eligible for the cost-of-living

##### Vesting:

Schedule: 100% after 7 years of contributing service if hired before 10/1/12, Members hired on and after 10/1/12 are 100% vested after 10 years.

Benefit Amount: Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

##### Disability:

Eligibility: Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit: Benefit accrued to date of disability but not less than 42% of Average Final Compensation (if Service Incurred).

##### Pre-Retirement Death Benefits:

Vested: Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested: Refund of accumulated contributions without interest.

##### Share Plan:

Funded Status: Not currently funded.

#### *Contributions*

Member Contributions: 6.8% of Salary.

District and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Chapter 112, Florida Statutes.

## Investments

*Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2018:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	50.00%
International Equity	10.00%
Broad Market Fixed Income	25.00%
Global Fixed Income	5.00%
Real Estate	10.00%
Total	100.00%

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended September 30, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 8.67 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return: At Member's election:

- (1) Actual net rate of investment return (total return net of brokerage commissions, management fees and transaction costs) credited each fiscal quarter, or
- (2) 6.5% per annum compounded monthly.

Members may elect to change form of return one time.

The DROP balance as September 30, 2018 is \$264,567.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2018 were as follows:

Total Pension Liability	\$ 28,069,778
Plan Fiduciary Net Position	\$ (20,867,421)
Sponsor's Net Pension Liability	<u>\$ 7,202,357</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	74.34%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

*Mortality Rate Healthy Inactive Lives:*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

*Mortality Rate Healthy Active Lives:*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

*Mortality Rate Disabled Lives:*

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The most recent actuarial experience study used to review the other significant assumptions was dated November 30, 2018.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018 the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	7.50%
International Equity	8.50%
Broad Market Fixed Income	2.50%
Global Fixed Income	3.50%
Real Estate	4.50%

Discount Rate:  
The Discount Rate used to measure the Total Pension Liability was 7.40 percent.  
The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease	Current Discount Rate	1% Increase
	6.40%	7.40%	8.40%
Sponsor's Net Pension Liability	\$ 10,897,430	\$ 7,202,357	\$ 4,189,232

# SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

## Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	471,083	430,846	412,422
Interest	1,979,577	1,948,687	1,854,384
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	378,098	(829,240)	(240,493)
Changes of assumptions	108,528	-	1,634,737
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	(775,745)	(977,835)
Net Change in Total Pension Liability	1,355,716	774,548	2,683,215
Total Pension Liability - Beginning	26,714,062	25,939,514	23,256,299
Total Pension Liability - Ending (a)	<u>\$ 28,069,778</u>	<u>\$ 26,714,062</u>	<u>\$ 25,939,514</u>
Plan Fiduciary Net Position			
Contributions - Employer	2,134,887	1,275,999	836,684
Contributions - State	266,748	291,353	293,567
Contributions - Employee	113,840	112,630	107,918
Net Investment Income	1,586,419	1,862,888	1,482,436
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	(775,745)	(977,835)
Administrative Expense	(29,796)	(32,011)	(25,310)
Net Change in Plan Fiduciary Net Position	2,490,528	2,735,114	1,717,460
Plan Fiduciary Net Position - Beginning	18,376,893	15,641,779	13,924,319
Plan Fiduciary Net Position - Ending (b)	<u>\$ 20,867,421</u>	<u>\$ 18,376,893</u>	<u>\$ 15,641,779</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,202,357</u>	<u>\$ 8,337,169</u>	<u>\$ 10,297,735</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	74.34%	68.79%	60.30%
Covered Employee Payroll	\$ 1,674,116	\$ 1,656,321	\$ 1,587,030
Net Pension Liability as a percentage of Covered Employee Payroll	430.22%	503.35%	648.87%

### **Notes to Schedule:**

#### *Changes of assumptions:*

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from an actuarial experience study dated November 30, 2018, the Board adopted the following changes:

- The investment return assumption was lowered from 7.5% per year to 7.4% per year, net of investment-related expenses.
- The assumed rates of salary increase have been amended.
- The assumed rates of normal retirement have been amended.
- The assumed rates of withdrawal have been amended.

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- The investment return assumption was reduced from 8.00% to 7.50%.
- As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the RP-2000 Combined Healthy Tables to the mortality tables used by the Florida Retirement System for special risk employees.

# SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

## Last 10 Fiscal Years

	09/30/2015	09/30/2014	09/30/2013
Total Pension Liability			
Service Cost	540,120	702,391	650,362
Interest	1,893,391	1,756,834	1,616,439
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(1,748,273)	-	-
Changes of assumptions	(256,184)	-	-
Benefit Payments, including Refunds of Employee Contributions	(600,036)	(579,955)	(547,818)
Net Change in Total Pension Liability	(170,982)	1,879,270	1,718,983
Total Pension Liability - Beginning	23,427,281	21,548,011	19,829,028
Total Pension Liability - Ending (a)	<u>\$ 23,256,299</u>	<u>\$ 23,427,281</u>	<u>\$ 21,548,011</u>
Plan Fiduciary Net Position			
Contributions - Employer	687,531	697,413	882,319
Contributions - State	371,910	326,318	342,803
Contributions - Employee	104,560	126,109	141,681
Net Investment Income	(784,838)	1,510,241	1,092,797
Benefit Payments, including Refunds of Employee Contributions	(600,036)	(579,955)	(547,818)
Administrative Expense	(32,924)	(14,883)	(18,656)
Net Change in Plan Fiduciary Net Position	(253,797)	2,065,243	1,893,126
Plan Fiduciary Net Position - Beginning	14,178,116	12,112,873	10,219,747
Plan Fiduciary Net Position - Ending (b)	<u>\$ 13,924,319</u>	<u>\$ 14,178,116</u>	<u>\$ 12,112,873</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 9,331,980</u>	<u>\$ 9,249,165</u>	<u>\$ 9,435,138</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	59.87%	60.52%	56.21%
Covered Employee Payroll	\$ 1,537,650	\$ 1,854,542	\$ 2,083,542
Net Pension Liability as a percentage of Covered Employee Payroll	606.90%	498.73%	452.84%

### **Notes to Schedule:**

#### *Changes of assumptions:*

For measurement date 09/30/2015, amounts reported as changes of assumptions were in conjunction with the August 28, 2015 experience study, the Board adopted the following assumption changes:

- Salary Increases change from 7.5% per year to a table based on service that grades down from 10% to 4%.
- Mortality Rates change from the RP 2000 table with no-projection for healthy lives to the RP-2000 table projected with scale BB through 2015 (disabled lives are set forward 5 years).



## SCHEDULE OF CONTRIBUTIONS

### Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Total Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,213,734	\$ 2,401,635	\$ (1,187,901)	\$ 1,674,116	143.46%
09/30/2017	\$ 1,323,401	\$ 1,567,352	\$ (243,951)	\$ 1,656,321	94.63%
09/30/2016	\$ 1,090,290	\$ 1,130,251	\$ (39,961)	\$ 1,587,030	71.22%
09/30/2015	\$ 1,059,441	\$ 1,059,441	\$ -	\$ 1,537,650	68.90%
09/30/2014	\$ 1,023,707	\$ 1,023,731	\$ (24)	\$ 1,854,542	55.20%
09/30/2013	\$ 1,225,122	\$ 1,225,122	\$ -	\$ 2,083,542	58.80%

#### Notes to Schedule

Valuation Date: 10/01/2017

Actuarially determined contribution rates are calculated as of October 1, one year prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality:

*Healthy Lives (Inactive):*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

*Healthy Lives (Active):*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

*Disabled Lives:*

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2016 FRS valuation report. Prior assumption was the July 1, 2015 FRS special risk mortality rates. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.5% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan's target asset allocation and expected long-term rate of return by asset class.

Retirement Age:

Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age (Age 52 with 25 years of Credited Service for Members hired on or after October 1, 2012). Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption is reasonable based on plan provisions.

Early Retirement: Commencing with the earliest Early Retirement Age (50), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption is reasonable based on plan provisions.

Disability Rates: See table below (1201). It is assumed that 75% of disablements are service related. This assumption is based on assumptions used for other plans containing municipal firefighters.

Termination Rates: See table below (1302). This assumption is based on assumptions used for other plans containing municipal firefighters.

Salary Increases:

Credited Service	Salary Increase
0	10.0%
1	9.0%
2	8.0%
3	7.5%
4	7.0%
5	6.5%
6	6.0%
7	5.5%
8	5.0%
9	4.5%
10+	4.0%

This assumption is based on the results of an experience study dated August 28, 2015.

Payroll Increase: None.

Funding Method: Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method: All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

Termination and Disability Rate Tables:

Age	% Becoming Disabled During the Year	% Terminating During the Year
20	0.03%	6.0%
30	0.04%	5.0%
40	0.07%	2.6%
50	0.18%	0.8%

**SCHEDULE OF INVESTMENT RETURNS**  
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	8.67%
09/30/2017	11.67%
09/30/2016	10.74%
09/30/2015	-5.49%
09/30/2014	12.26%
09/30/2013	10.08%

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2019)

### General Information about the Pension Plan

#### *Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: Two District appointees, two Members of the Department elected by the membership, and a fifth Member elected by other four and appointed by the District.

Full-time employees who are classified as full-time certified firefighters participate in the System as a condition of employment.

#### *Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	16
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	8
Active Plan Members	28
	52
	52

#### *Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

##### Normal Retirement:

Date: Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age.

Benefit: 3.5% of Average Final Compensation times Credited Service (2.5% if hired on or after October 1, 2012).

##### Early Retirement:

Eligibility: Age 50 and 10 Years of Credited Service.

Benefit: Accrued benefit, reduced 3% for each year prior to Normal Retirement.

##### Cost-of-Living Adjustment:

Service retirees on and after 10/1/02 (hired before 10/1/12) receive annual 2% increases beginning the October 1 following one full year of retirement. Members hired on and after 10/1/12 are not eligible for the cost-of-living adjustment.

##### Vesting:

Schedule: 100% after 7 years of contributing service if hired before 10/1/12, Members hired on and after 10/1/12 are 100% vested after 10 years.

Benefit Amount: Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

##### Disability:

Eligibility: Service Incurred: Covered from Date of Employment.

Non-Service Incurred: 10 years of Credited Service.

Benefit: Benefit accrued to date of disability but not less than 42% of Average Final Compensation (if Service Incurred).

##### Pre-Retirement Death Benefits:

Vested: Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested: Refund of accumulated contributions without interest.

##### Share Plan:

Funded Status: Not currently funded.

#### *Contributions*

Member Contributions: 6.8% of Salary.

District and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Chapter 112, Florida Statutes.

## Net Pension Liability

The measurement date is September 30, 2018.

The measurement period for the pension expense was October 1, 2017 to September 30, 2018.

The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2018.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

### *Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

### *Mortality Rate Healthy Inactive Lives:*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

### *Mortality Rate Healthy Active Lives:*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

### *Mortality Rate Disabled Lives:*

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The most recent actuarial experience study used to review the other significant assumptions was dated November 30, 2018.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, Net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2018 the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	50.00%	7.50%
International Equity	10.00%	8.50%
Broad Market Fixed Income	25.00%	2.50%
Global Fixed Income	5.00%	3.50%
Real Estate	10.00%	4.50%
Total	100.00%	

### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.40 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate.

Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current Plan Members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

## CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting period ending at September 30, 2018	\$ 26,714,062	\$ 18,376,893	\$ 8,337,169
Changes for a Year:			
Service Cost	471,083	-	471,083
Interest	1,979,577	-	1,979,577
Differences between Expected and Actual Experience	378,098	-	378,098
Changes of assumptions	108,528	-	108,528
Changes of benefit terms	-	-	-
Contributions - Employer	-	2,134,887	(2,134,887)
Contributions - State	-	266,748	(266,748)
Contributions - Employee	-	113,840	(113,840)
Net Investment Income	-	1,586,419	(1,586,419)
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	(1,581,570)	-
Administrative Expense	-	(29,796)	29,796
Net Changes	1,355,716	2,490,528	(1,134,812)
Reporting period ending at September 30, 2019	\$ 28,069,778	\$ 20,867,421	\$ 7,202,357

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.40%	7.40%	8.40%
Sponsor's Net Pension Liability	\$ 10,897,430	\$ 7,202,357	\$ 4,189,232

*Pension Plan Fiduciary Net Position.*

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

**FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED  
INFLOWS OF RESOURCES RELATED TO PENSIONS**  
FISCAL YEAR SEPTEMBER 30, 2018

For the year ended September 30, 2018, the Sponsor has recognized a Pension Expense of \$814,245.

On September 30, 2018, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	-	1,179,244
Changes of assumptions	817,368	64,046
Net difference between Projected and Actual Earnings on Pension Plan investments	-	68,760
Employer and State contributions subsequent to the measurement date	2,401,635	-
Total	<u>\$ 3,219,003</u>	<u>\$ 1,312,050</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2018.

Other amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2019	\$ (278,826)
2020	\$ 326,090
2021	\$ (410,537)
2022	\$ (131,409)
2023	\$ -
Thereafter	\$ -



**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND  
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS  
FISCAL YEAR SEPTEMBER 30, 2019**

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$762,426.

On September 30, 2019, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	283,575	474,743
Changes of assumptions	490,080	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	289,197
Employer and State contributions subsequent to the measurement date	TBD	-
Total	TBD	\$ 763,940

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2019.

Other amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2020	\$ 412,897
2021	\$ (323,730)
2022	\$ (44,602)
2023	\$ (34,850)
2024	\$ -
Thereafter	\$ -

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

### Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2019 09/30/2018	09/30/2018 09/30/2017	09/30/2017 09/30/2016
Total Pension Liability			
Service Cost	471,083	430,846	412,422
Interest	1,979,577	1,948,687	1,854,384
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	378,098	(829,240)	(240,493)
Changes of assumptions	108,528	-	1,634,737
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	(775,745)	(977,835)
Net Change in Total Pension Liability	1,355,716	774,548	2,683,215
Total Pension Liability - Beginning	26,714,062	25,939,514	23,256,299
Total Pension Liability - Ending (a)	<u>\$ 28,069,778</u>	<u>\$ 26,714,062</u>	<u>\$ 25,939,514</u>
Plan Fiduciary Net Position			
Contributions - Employer	2,134,887	1,275,999	836,684
Contributions - State	266,748	291,353	293,567
Contributions - Employee	113,840	112,630	107,918
Net Investment Income	1,586,419	1,862,888	1,482,436
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	(775,745)	(977,835)
Administrative Expense	(29,796)	(32,011)	(25,310)
Net Change in Plan Fiduciary Net Position	2,490,528	2,735,114	1,717,460
Plan Fiduciary Net Position - Beginning	18,376,893	15,641,779	13,924,319
Plan Fiduciary Net Position - Ending (b)	<u>\$ 20,867,421</u>	<u>\$ 18,376,893</u>	<u>\$ 15,641,779</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,202,357</u>	<u>\$ 8,337,169</u>	<u>\$ 10,297,735</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	74.34%	68.79%	60.30%
Covered Employee Payroll	\$ 1,674,116	\$ 1,656,321	\$ 1,587,030
Net Pension Liability as a percentage of Covered Employee Payroll	430.22%	503.35%	648.87%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from an actuarial experience study dated November 30, 2018, the Board adopted the following changes:

- The investment return assumption was lowered from 7.5% per year to 7.4% per year, net of investment-related expenses.
- The assumed rates of salary increase have been amended.
- The assumed rates of normal retirement have been amended.
- The assumed rates of withdrawal have been amended.

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- The investment return assumption was reduced from 8.00% to 7.50%. □
- As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed from the RP-2000 Combined Healthy Tables to the mortality tables used by the Florida Retirement System for special risk employees.

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2016 09/30/2015	09/30/2015 09/30/2014	09/30/2014 09/30/2013
Total Pension Liability			
Service Cost	540,120	702,391	650,362
Interest	1,893,391	1,756,834	1,616,439
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(1,748,273)	-	-
Changes of assumptions	(256,184)	-	-
Benefit Payments, including Refunds of Employee Contributions	(600,036)	(579,955)	(547,818)
Net Change in Total Pension Liability	(170,982)	1,879,270	1,718,983
Total Pension Liability - Beginning	23,427,281	21,548,011	19,829,028
Total Pension Liability - Ending (a)	<u>\$ 23,256,299</u>	<u>\$ 23,427,281</u>	<u>\$ 21,548,011</u>
Plan Fiduciary Net Position			
Contributions - Employer	687,531	697,413	882,319
Contributions - State	371,910	326,318	342,803
Contributions - Employee	104,560	126,109	141,681
Net Investment Income	(784,838)	1,510,241	1,092,797
Benefit Payments, including Refunds of Employee Contributions	(600,036)	(579,955)	(547,818)
Administrative Expense	(32,924)	(14,883)	(18,656)
Net Change in Plan Fiduciary Net Position	(253,797)	2,065,243	1,893,126
Plan Fiduciary Net Position - Beginning	14,178,116	12,112,873	10,219,747
Plan Fiduciary Net Position - Ending (b)	<u>\$ 13,924,319</u>	<u>\$ 14,178,116</u>	<u>\$ 12,112,873</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 9,331,980</u>	<u>\$ 9,249,165</u>	<u>\$ 9,435,138</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	59.87%	60.52%	56.21%
Covered Employee Payroll	\$ 1,537,650	\$ 1,854,542	\$ 2,083,542
Net Pension Liability as a percentage of Covered Employee Payroll	606.90%	498.73%	452.84%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2015, amounts reported as changes of assumptions were in conjunction with the August 28, 2015 experience study, the Board adopted the following assumption changes:

- Salary Increases change from 7.5% per year to a table based on service that grades down from 10% to 4%.
- Mortality Rates change from the RP 2000 table with no-projection for healthy lives to the RP-2000 table projected with scale BB through 2015 (disabled lives are set forward 5 years).

## SCHEDULE OF CONTRIBUTIONS

### Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Total Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,213,734	\$ 2,401,635	\$ (1,187,901)	\$ 1,674,116	143.46%
09/30/2017	\$ 1,323,401	\$ 1,567,352	\$ (243,951)	\$ 1,656,321	94.63%
09/30/2016	\$ 1,090,290	\$ 1,130,251	\$ (39,961)	\$ 1,587,030	71.22%
09/30/2015	\$ 1,059,441	\$ 1,059,441	\$ -	\$ 1,537,650	68.90%
09/30/2014	\$ 1,023,707	\$ 1,023,731	\$ (24)	\$ 1,854,542	55.20%
09/30/2013	\$ 1,225,122	\$ 1,225,122	\$ -	\$ 2,083,542	58.80%

#### Notes to Schedule

Valuation Date: 10/01/2017

Actuarially determined contribution rates are calculated as of October 1, one year prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality:

*Healthy Lives (Inactive):*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

*Healthy Lives (Active):*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90%

*Disabled Lives:*

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2016 FRS valuation report. Prior assumption was the July 1, 2015 FRS special risk mortality rates. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.5% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan's target asset allocation and expected long-term rate of return by asset class.

Retirement Age:

Earlier of: 1) Age 55 and 10 years of Credited Service or 2) 20 Years of Credited Service regardless of age (Age 52 with 25 years of Credited Service for Members hired on or after October 1, 2012). Also, any member who has reached Normal Retirement is assumed to continue employment for one additional year. This assumption is reasonable based on plan provisions.

Early Retirement: Commencing with the earliest Early Retirement Age (50), members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption is reasonable based on plan provisions.

Disability Rates: See table below (1201). It is assumed that 75% of disablements are service related. This assumption is based on assumptions used for other plans containing municipal firefighters.

Termination Rates: See table below (1302). This assumption is based on assumptions used for other plans containing municipal firefighters.

Salary Increases:

Credited Service	Salary Increase
0	10.00%
1	9.00%
2	8.00%
3	7.50%
4	7.00%
5	6.50%
6	6.00%
7	5.50%
8	5.00%
9	4.50%
10+	4.00%

This assumption is based on the results of an experience study dated August 28, 2015.

Payroll Increase: None.

Funding Method: Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method: All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

Termination and Disability Rate Tables:

Age	% Becoming Disabled During the Year	% Terminating During the Year
20	0.03%	6.0%
30	0.04%	5.0%
40	0.07%	2.6%
50	0.18%	0.8%

## EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

**The following information is not required to be disclosed but is provided for informational purposes.**

FINAL COMPONENTS OF PENSION EXPENSE  
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 10,297,735	\$ 1,677,473	\$ 3,957,602	\$ -
Employer and State Contributions made after 09/30/2017	-	-	2,401,635	-
Total Pension Liability Factors:				
Service Cost	430,846	-	-	430,846
Interest	1,948,687	-	-	1,948,687
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(829,240)	829,240	-	-
Current year amortization of experience difference	-	(704,501)	-	(704,501)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	(64,046)	(408,684)	344,638
Benefit Payments, including Refunds of Employee Contributions	(775,745)	-	-	-
Net change	<u>774,548</u>	<u>60,693</u>	<u>1,992,951</u>	<u>2,019,670</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,275,999	-	(1,275,999)	-
Contributions - State	291,353	-	(291,353)	-
Contributions - Employee	112,630	-	-	(112,630)
Projected Net Investment Income	1,205,842	-	-	(1,205,842)
Difference between projected and actual earnings on Pension Plan investments	657,046	657,046	-	-
Current year amortization	-	(307,030)	(388,066)	81,036
Benefit Payments, including Refunds of Employee Contributions	(775,745)	-	-	-
Administrative Expenses	(32,011)	-	-	32,011
Net change	<u>2,735,114</u>	<u>350,016</u>	<u>(1,955,418)</u>	<u>(1,205,425)</u>
Ending Balance	<u>\$ 8,337,169</u>	<u>\$ 2,088,182</u>	<u>\$ 3,995,135</u>	<u>\$ 814,245</u>

**PRELIMINARY COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR SEPTEMBER 30, 2019**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 8,337,169	\$ 2,088,182	\$ 3,995,135	\$ -
Employer and State Contributions made after 09/30/2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	471,083	-	-	471,083
Interest	1,979,577	-	-	1,979,577
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	378,098	-	378,098	-
Current year amortization of experience difference	-	(704,501)	(94,523)	(609,978)
Change in assumptions about future economic or demographic factors or other inputs	108,528	-	108,528	-
Current year amortization of change in assumptions	-	(64,046)	(435,816)	371,770
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	-	-	-
Net change	<u>1,355,716</u>	<u>(768,547)</u>	<u>(43,713)</u>	<u>2,212,452</u>
Plan Fiduciary Net Position:				
Contributions - Employer	2,134,887	-	(2,134,887)	-
Contributions - State	266,748	-	(266,748)	-
Contributions - Employee	113,840	-	-	(113,840)
Projected Net Investment Income	1,412,171	-	-	(1,412,171)
Difference between projected and actual earnings on Pension Plan investments	174,248	174,248	-	-
Current year amortization	-	(341,877)	(388,066)	46,189
Benefit Payments, including Refunds of Employee Contributions	(1,581,570)	-	-	-
Administrative Expenses	(29,796)	-	-	29,796
Net change	<u>2,490,528</u>	<u>(167,629)</u>	<u>(2,789,701)</u>	<u>(1,450,026)</u>
Ending Balance	<u>\$ 7,202,357</u>	<u>\$ 1,152,006</u>	<u>TBD</u>	<u>\$ 762,426</u>

\* Employer and State Contributions subsequent to the measurement date made after September 30, 2018 but made on or before September 30, 2019 need to be added.



## AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2014	\$ (519,011)	5	\$ (103,802)	\$ (103,802)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 1,940,329	5	\$ 388,066	\$ 388,066	\$ 388,066	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (359,090)	5	\$ (71,818)	\$ (71,818)	\$ (71,818)	\$ (71,818)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (657,046)	5	\$ (131,410)	\$ (131,409)	\$ (131,409)	\$ (131,409)	\$ (131,409)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (174,248)	5	\$ -	\$ (34,848)	\$ (34,850)	\$ (34,850)	\$ (34,850)	\$ (34,850)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 81,036	\$ 46,189	\$ 149,989	\$ (238,077)	\$ (166,259)	\$ (34,850)	\$ -	\$ -	\$ -	\$ -	\$ -

## AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ (256,184)	4	\$ (64,046)	\$ (64,046)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 1,634,737	4	\$ 408,684	\$ 408,684	\$ 408,684	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 108,528	4	\$ -	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 344,638	\$ 371,770	\$ 435,816	\$ 27,132	\$ 27,132	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

## AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ (1,748,273)	4	\$ (437,068)	\$ (437,068)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (240,493)	4	\$ (60,123)	\$ (60,123)	\$ (60,123)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (829,240)	4	\$ (207,310)	\$ (207,310)	\$ (207,310)	\$ (207,310)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 378,098	4	\$ -	\$ 94,523	\$ 94,525	\$ 94,525	\$ 94,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (704,501)	\$ (609,978)	\$ (172,908)	\$ (112,785)	\$ 94,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -